

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Mun Leong Wong et al

Confirmation No.: 7468

Application No.: 09/922422

Examiner:

Filing Date: Aug 02, 2001

Group Art Unit: 2182

Title: Method For Data Transfer Using A Mobile Device

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SEP 10 2003

Technology Center 2100

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL LETTER FOR RESPONSE/AMENDMENT

Sir:

Transmitted herewith is/are the following in the above-identified application:

- () Response/Amendment () Petition to extend time to respond
() New fee as calculated below () Supplemental Declaration
(X) No additional fee (Address envelope to "Mail Stop Non-Fee Amendment")
(X) Other: Drwg Transmittal Ltr, formal drwgs, IDS and Certified copy (fee \$ _____)
of SG200102248-2

CLAIMS AS AMENDED BY OTHER THAN A SMALL ENTITY						
(1) FOR	(2) CLAIMS REMAINING AFTER AMENDMENT	(3) NUMBER EXTRA	(4) HIGHEST NUMBER PREVIOUSLY PAID FOR	(5) PRESENT EXTRA	(6) RATE	(7) ADDITIONAL FEES
TOTAL CLAIMS	13	MINUS	20	= 0	X \$18	\$ 0
INDEP. CLAIMS	4	MINUS	4	= 0	X \$84	\$ 0
[] FIRST PRESENTATION OF A MULTIPLE DEPENDENT CLAIM					+ \$280	\$ 0
EXTENSION FEE	1ST MONTH \$110.00	2ND MONTH \$410.00	3RD MONTH \$930.00	4TH MONTH \$1450.00		\$ 0
OTHER FEES						\$
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT						\$ 0

Charge \$ 0 to Deposit Account 08-2025. At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450.

Date of Deposit: 5 Sept 2003

Typed Name: Ramona J. Zaya

Signature: 

Respectfully submitted,

Mun Leong Wong et al

By 

Wendell J. Jones

Attorney/Agent for Applicant(s)

Reg. No. 45,961

Date: 5 Sept 03

**REGISTRY OF PATENTS
SINGAPORE**

This is to certify that the annexed is a true copy of the following Singapore patent application as filed in this Registry.

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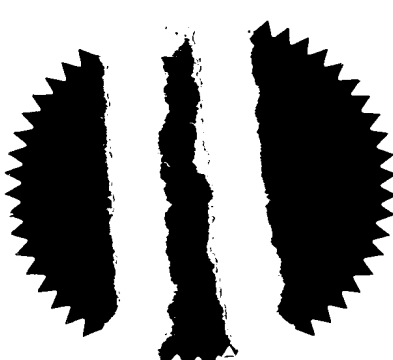
Technology Center 2100

Date of Filing : 23 APRIL 2001

Application Number : 200102248-2

Applicant(s) : HEWLETT-PACKARD COMPANY

Title of Invention : METHOD FOR DATA TRANSFER USING A
MOBILE DEVICE




CHIG KAM TACK
Assistant Registrar
for REGISTRAR OF PATENTS
SINGAPORE

**SINGAPORE
PATENTS ACT
(CHAPTER 221)
PATENTS RULES**

23 APR 2001
200102248-2

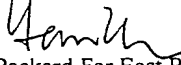
The Registrar of Patents
Registry of Patents

**REQUEST FOR THE GRANT OF A PATENT
THE GRANT OF A PATENT IS REQUESTED BY THE UNDERSIGNED ON THE BASIS OF THE PRESENT
APPLICATION**

I. Title of Invention	Method For Data Transfer Using A Mobile Device	
II. Applicant(s) (See note 2)	(a) Name	Hewlett-Packard Company
	Body Description/ Residency	A company incorporated under the laws of the State of Delaware, United States of America
	Street Name & Number	3000 Hanover Street
	City	Palo Alto
	State	California 94304
	Country	United States of America
	(b) Name	
	Body Description/ Residency	
	Street Name & Number	
	City	
	State	
	Country	
	(c) Name	
	Body Description/ Residency	
	Street Name & Number	
	City	
	State	
	Country	

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III. Declaration of Priority (see note 3)	Country/Country Designated		File no.																	
	Filing Date																			
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	Country/Country Designated		File no.																	
	Filing Date																			
IV. Inventors (See note 4)																				
(a) The applicant(s) is/are the sole/joint inventor(s).		<div style="display: flex; justify-content: space-around;"> <div> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No </div> <div> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No </div> </div>																		
(b) A statement on Patents Form 8 is furnished.																				
V. Name of Agent (if any) (See note 5)		Intellectual Property, Asia Pacific / Legal Department Hewlett-Packard Far East Pte Ltd																		
VI. Address for Service (See note 6)		<table border="1"> <tr> <td>Block/Hse No</td> <td></td> <td>Level No</td> <td></td> </tr> <tr> <td>Unit No/PO Box</td> <td>#02-12</td> <td>Postal Code</td> <td>119967</td> </tr> <tr> <td>Street Name</td> <td colspan="3">438A Alexandra Road</td> </tr> <tr> <td>Building Name</td> <td colspan="3">Alexandra Technopark</td> </tr> </table>			Block/Hse No		Level No		Unit No/PO Box	#02-12	Postal Code	119967	Street Name	438A Alexandra Road			Building Name	Alexandra Technopark		
Block/Hse No		Level No																		
Unit No/PO Box	#02-12	Postal Code	119967																	
Street Name	438A Alexandra Road																			
Building Name	Alexandra Technopark																			
VII. Claiming an earlier filing date under section 20(3), 26(6) or 47(4). (See note 7)		<table border="1"> <tr> <td>Application No.</td> <td colspan="3"></td> </tr> <tr> <td>Filing Date</td> <td></td> <td></td> <td></td> </tr> </table> <p>[Please tick in the relevant space provided]:</p> <p>() Proceeding under rule 27(1)(a). Date on which the earlier application was amended = _____ or () Proceeding under rule 27(1)(b).</p>			Application No.				Filing Date											
Application No.																				
Filing Date																				

VIII. Invention has been displayed at an International Exhibition (See note 8)		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
IX. Section 114 requirements (See note 9)		The invention relates to and/or used a micro-organism deposited for the purposes of disclosure in accordance with section 114 with a depository authority under the Budapest Treaty. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
X. Check List (To be filled in by applicant or agent)	A. The application contains the following number of sheet(s):-		
	1. Request	4	sheets
	2. Description	10	sheets
	3. Claim(s).	4	sheets
	4. Drawing(s).	5	sheets
	5. Abstract.	1	sheets
	B. The application as filed is accompanied by:-		
	1. Priority document	<input type="checkbox"/>	
	2. Translation of priority document	<input type="checkbox"/>	
	3. Statement of Inventorship & right to grant	<input checked="" type="checkbox"/>	
	4. International Exhibition Certificate	<input type="checkbox"/>	
	XI. Signature(s) (See note 10)	Applicant (a)	 Hewlett-Packard Far East Pte Ltd
Date		23 April 2001	
Applicant (b)			
Date			
Applicant (c)			
Date			

23 APR 2001

NOTES:

1. This form when completed, should be brought or sent to the Registry of Patents together with the prescribed fee and 3 copies of the description of the invention, and of any drawings.
2. Enter the name and address of each applicant in the spaces provided at paragraph II. Names of individuals should be indicated in full and the surname or family name should be underlined. The names of all partners in a firm must be given in full. The place of residence of each individual should also be furnished in the space provided. Bodies corporate should be designated by their corporate name and country of incorporation and, where appropriate, the state of incorporation within that country should be entered where provided. Where more than 3 applicants are to be named, the names and address of the fourth and any further applicants should be given on a separate sheet attached to this form together with the signature of each of these further applicants.
3. The declaration of priority at paragraph III should state the date of the previous filing, the country in which it was made, and indicate the file number, if available. Where the application relied upon in an International Application or a regional patent application e.g. European patent application, one of the countries designated in that application [being one falling under the Patents (Convention Countries) Order] should be identified and the name of that country should be entered in the space provided.
4. Where the applicant or applicants is/are the sole inventor or the joint inventors, paragraph IV should be completed by marking the 'YES' Box in the declaration (a) and the 'NO' Box in the alternative statement (b). Where this is not the case, the 'NO' Box in declaration (a) should be marked and a statement will be required to be filed on Patents Form 8.
5. If the applicant has appointed an agent to act on his behalf, the agent's name should be indicated in the spaces available at paragraph V.
6. An address for service in Singapore to which all documents may be sent must be stated at paragraph VI. It is recommended that a telephone number be provided if an agent is not appointed.
7. When an application is made by virtue of section 20(3), 26(6) or 47(4), the appropriate section should be identified at paragraph VII and the number of the earlier application or any patent granted thereon identified. Applicants proceeding under section 26(6) should identify which provision in rule 27 they are proceeding under. If the applicants are proceeding under rule 27(1)(a), they should also indicate the date on which the earlier application was amended.
8. Where the applicant wishes an earlier disclosure of the invention by him at an International Exhibition to be disregarded in accordance with section 14(4)(c), then the 'YES' Box at paragraph VIII should be marked. Otherwise the 'NO' Box should be marked.
9. Where in disclosing the invention the application refers to one or more micro-organisms deposited with a depository authority under the Budapest Treaty, then the 'YES' Box at paragraph IX should be marked. Otherwise the 'NO' Box should be marked.
10. Attention is drawn to rules 90 and 105 of the Patent Rules. Where there are more than 3 applicants, see also Note 2 above.
11. Applicants resident in Singapore are reminded that if the Registry of Patents considers that an application contains information the publication of which might be prejudicial to the defence of Singapore or the safety of the public, it may prohibit or restrict its publication or communication. Any person resident in Singapore and wishing to apply for patent protection in other countries must first obtain permission from the Singapore Registry of Patents unless they have already applied for a patent for the same invention in Singapore. In the latter case, no application should be made overseas until at least 2 months after the application has been filed in Singapore.

For Official Use

Application Filing Date: / /

Request received on : / /

Fee received on : / /

Amount :

*Cash/Cheque/Money Order No:

**Delete whichever is inapplicable*

METHOD FOR DATA TRANSFER USING A MOBILE DEVICE

BACKGROUND OF THE INVENTION

5 This invention relates to a method for transferring remotely-stored data using a mobile device.

Conventionally, a user who wants to transfer files or documents from one personal computer (PC) to another would need to rely upon a storage medium
10 such as diskettes to copy data and transfer it to the other device(s). This method requires the user to carry the storage medium when the user is away from the PC where the data is saved. Furthermore, such a method may increase the risk of virus infection in that sharing storage media between computers may expose each computer to more virus-infected computers.

15 Alternatively, the user can use File Transfer Protocol (FTP) to transfer the required document through network, or attach the required document within an email. Both solutions, however, require the user to have access to a PC in order to access the document, directly if the document is saved in the PC or via
20 a network if the document is shared in order to perform the data transfer.

Therefore, there is a need for a convenient method to transfer data even when the user is physically away from a PC and the data.

25 SUMMARY OF THE INVENTION

According to an embodiment of the invention, a method which allows a user of a mobile device to transfer one of a plurality of data stored in a sub-computer system to a target computer system is initiated by composing an instruction in
30 the mobile device. The instruction designates a first piece of data to be transmitted as well as a target computer system to which the first piece of data is to be transmitted. Such an instruction is sent from the mobile device to the

central computer system via a first network. The central computer system informs the sub-computer system at least part of the instruction, and the first piece of data is subsequently transmitted from the sub-computer system to the target computer system according to the instruction.

5

In one aspect of the invention, information for identifying the plurality of data has been stored in the central computer system. Upon a request from the mobile device, these information is sent to the mobile device for the user to designate the first piece of data.

10

In another aspect according to the invention, the first piece of data is first sent to the central computer system. The user also composes a first piece of information in the mobile device, which is transmitted to the central computer system via the first network, preferably together with the instruction. The central computer system accordingly generates a file by combining the first piece of information with the first piece of data, and further transmits the file to the target computer system. Ideally the file is an email attached with the first piece of data.

15

20

Other aspects and advantages of the invention will become apparent from the following detailed description, taken in conjunction with the accompanying drawings, illustrating by way of example the principles of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

25

Figures 1 and 2 illustrate one embodiment of the invention;

Figure 3 illustrates in details the step of sending document to the target shown in Figure 2; and

30

Figures 4 and 5 illustrate another embodiment of the invention.

DETAILED DESCRIPTION OF THE INVENTION

In one embodiment of the invention as shown in Figures 1 and 2, a user of a mobile device 100 such as a mobile phone can use the mobile phone to transfer one of a plurality of documents stored in the user's personal computer 110 to a designated target computer. To enable the user to access the documents remotely, in step 201 the documents have been shared out to a central server 106 via the internet 108, that is, filenames and/or locations of these documents are saved in the central server 106. While the user selects the files to be shared, a string of information is packed into an HTTP (Hiper Text Transfer Protocol) packet in an illustrative format shown below:

- HTTP header
- /MapleWML/CMServer/AddFile.asp
- Username (computer name for identifying the user's personal computer)
- User Password (for the purpose of security)
- User Entered Name (e.g., a friendly name for the file)
- File Size
- HTTP Trailer.

The parameter "User Entered Name" identifies and is associated with the actual location of the individual file to be shared. By selecting such a user-entered name (to be discussed later), the central server 106 and the user's personal computer 110 is able to identify the file to be transmitted.

Such an HTTP packet then will be sent to the central server 106 via the internet 108 as shown by Arrow 107 in Figure 1. In this embodiment, upon receiving it, the central server 106 is activated by the parameter "/MapleWML/CMServer/AddFile.asp" to run a script. Thus the information following this parameter, i.e., the Username, User password, User Entered Name, and File size, will be added to a file database (not shown) of the central server 106. The file database stores the filenames of the files shared out by each user.

Further, in this embodiment, the personal computer 110 is publicly accessible, that is, in a public domain so that by using its Username and User Password, other computers or servers can access and retrieve documents from it.
5 Furthermore, the personal computer needs to be running for the purpose of this invention.

Additionally, in Figure 1, a plurality of target computers 112 is connected to the central server 106 via the internet 106, and is also publicly accessible. As a
10 result, the central server 106 can identify and send files to a designated target computer through the Internet Protocol (IP) address of the designated target computer.

When the user is away from the user's personal computer 110 and wants to
15 transmit a softcopy of a document which is stored in the personal computer 110 and has been shared out, as shown by step 203, the user may use the mobile phone 100 to request the central server 106 for the information about those files that have been shared, referring to Arrow 113 in Figure 1. The request reaches the central server 106 via a Public Switched Telephone Network
20 (PSTN) 104, a gateway 102 and the internet 108. For communication between the mobile device 100 and the gateway 102, standard telecommunication protocols such as Wireless Application Protocols (WAP) are used. It is understood that WAP is only used as a transport layer protocol, which presently sits on GSM. Higher data rate transport layers such as 3G can also be used.
25 In the context of WAP, the mobile phone is WAP-enabled, and the request from the mobile device 100 is in the following illustrative format:

- WAP Header
- Username
- User Password
- 30 - WAP Trailer.

The gateway 102 converts the request, as well as instructions (as discussed below), to an HTTP format suitable for transfer through the internet. Subsequently, the gateway 102 passes the request to the central server 106.

5 It is noted that the mobile device 100 needs to install settings for identifying the gateway 102 and the central server 106 in advance. The mobile device will then be able to contact the appropriate central server 106 via the appropriate gateway 102. Such a technology is well known in the field of wireless communication.

10

After receiving the request, the central server 106 packs a reply in the following illustrative HTTP format:

- HTTP Header
- <Filename>
- 15 - HTTP Trailer,

where the parameter "<Filename>" includes the user-entered-names of all the files shared out by this particular user which is identified by parameters "Username" and "User Password," that is, files which are stored in the personal computer 110 and are shared out. As shown by Arrow 115 in Figure 1, in step
20 205, the central server 106 further sends its reply through the established connection towards the gateway 102, which in turn would convert the reply into a WAP format for displaying on the mobile device 100.

By using the mobile device 100, in step 207, the user selects a document to be
25 transmitted. The user also designates one of the target computers 112 to which the document is to be transmitted by manually specifying the IP address thereof. Such a selection is incorporated into an instruction, a data transfer instruction in the case of this embodiment, by the mobile device 100 according to the following illustrative format:

30

- WAP Header
- Username
- User Password

- A First Filename (user-entered-name)
- IP Address of the Designated Target Computer
- WAP Trailer.

5 The parameter "A First Filename" identifies the location of the document to be printed, while the parameter "IP Address of the Target Computer" identifies the designated target computer to which the document is to be transmitted.

10 Referring to Arrow 117 in Figure 1, in step 209, the mobile device 100 then sends the data transfer instruction to the central server 106 for processing via the PSTN 104, gateway 102, and the internet 108.

15 After receiving the data transfer instruction, in step 211, as shown by Arrow 118 in Figure 1, the central server 106 sends the personal computer 110 the contents of the parameters "A First Filename" and "IP Address of the Designated Target Computer." The central server 106 identifies and accesses the personal computer 110 by using the parameters of "Username" and "User Password."

20 The personal computer 110 accordingly retrieves the designated document as specified by parameter "A First Filename." Subsequently, the personal computer 110 locates the designated target computer through its IP Address as specified in the data transfer instruction, and in step 213 directly transmits the retrieved document to the designated target computer via the internet 108 (referring to Arrow 119), by using FTP which is well known in the art. A data
25 transfer from the user's personal computer 110 to the designated target computer using the mobile device is thus accomplished.

30 Alternatively, as shown in Figure 3, after retrieving the designated document, the personal computer 110 packs the retrieved document into an HTTP packet, for example:

- HTTP Header
- /MapleWML/CMServer/FileUpload.asp

- Username
- User Password
- A First Filename
- Size of the File
- 5 - File Content
- HTTP Trailer.

Then, in step 301, the HTTP packet is sent to the central sever 106 which is initiated by the parameter "/MapleWML/CMServer/FileUpload.asp" to retrieve the information contained therein, including the designated document which is the content of parameter "File Content." When the central server 106 has
10 uploaded the designated document, in step 303, it saves the document into a "Temp" directory (not shown) in the central server under a unique filename. In step 305, the plurality of target computers 112 periodically polls the central server 106 according to the following illustrative format:

- 15 - HTTP Header
- IP Address
- HTTP Trailer.

The central server 106 identifies the designated target computer in step 307 by comparing the IP Address retrieved from such a poll with the one in the data transfer instruction. After the comparison, in step 309, the central server 106
20 consequently informs the designated target computer of the location and the unique filename of the uploaded designated document. In turn, the designated target computer downloads the designated document form the central server "Temp" directory by using Microsoft Foundation Class application program interface (API) "CInternetSession" in step 311.
25

In another embodiment of the invention as shown in Figures 4 and 5, the user can transmit a softcopy of the document stored in the user's personal computer 110 to a plurality of recipients 114, 114', and 114" by sending the recipients an
30 email with an attachment of the document.

Information of the user's SMTP (simple mail transfer protocol) server account, for example, SMTP server IP address and the port, needs to be given to the central server 106 in advance. The central server 106 receives emails text from the user, and after processing, further sends the email to the SMTP server
5 for distribution.

In the preferred embodiment, in step 501 the user uses the mobile phone to specify the recipient(s) email address (To), Copy to Recipient(s) email address (Cc:), and the email subject. The user also uses the mobile phone to compose
10 the email body in step 501, and then in step 503 send the central sever 106 the email (see Arrow 150 in Figure 4), together with a request for information about those files he has shared. Such a request is the same as the request described in the first embodiment.

15 Similarly to the embodiment described above, in step 505, the central sever 106 passes the mobile phone the user-entered-names of all the files shared out by this particular user. The user can then designate a document to be sent to the recipients in a data transfer instruction (referring to step 507). The data transfer instruction is the same as the one described in the first embodiment
20 except that the user does not need to specify the IP address of a target computer since the recipients have been identified by the email addresses. Similarly, such an instruction is sent in step 509 from the mobile phone to the central server 106 via the PSTN 104, gateway 102, and internet 108. The central server 106 further passes information identifying the designated
25 document to the personal computer 110 (see Arrow 151 in Figure 4). In step 511, the personal computer 110 retrieves the designated document, and send it to the central server 106 via the internet 108 (see Arrow 152).

30 With the information provided by the user such as the email address etc, in step 513, the central server packs the email body text and an attachment, i.e., the document retrieved from the personal computer 110, into a multipurpose internet mail extension (MIME) format for sending via the SMTP server (not

shown). As shown by Arrows 153, 154, and 155, in step 515, the email, attached with a MIME encoded designated document, will subsequently be sent to the specified recipients through the SMTP server which is a standard server implementing Simple Mail Transfer Protocol (SMTP) which is specialized in sending emails.

Other alternatives can be made to the above-described embodiments. For example, the documents can be forwarded to and stored in the central server 106 in advance so that the central server 106 will retrieve the designated document directly from its storage unit (not shown) when it has retrieved the data transfer instruction.

Besides, the user may send the central server 106 a combined data transfer instruction in the following illustrative format:

- WAP Header
- Username
- User Password
- A First Filename
- IP Address of the Designated Target Computer
- WAP Trailer.

Thus, the central server 106 directly gets the information about the document to be retrieved, as well as the address of the designated target computer to which the document is to be transmitted, without replying to and waiting for selections from the mobile device 100. In this case, the user may need to input the desired First Filename manually, unless this information is already stored in the mobile device. If the user's personal computer 110, like the central server 106, is capable of communicating with the mobile device 100 directly via PSTN 104, the gateway 102, and the internet 108, however, the user can send the combined data transfer instruction to the user's personal computer directly, rather than through the central server 106.

Furthermore, multiple documents can be transmitted simultaneously by designating multiple filenames in the data transfer instruction. After retrieving all the designated documents, the central server packs them together or into a single email, and further passes to the designated target computer or the recipients.

The plurality of target computers 112 can also be registered in the central server 106. As a result, the central server 106 knows where the target computers 112 are through target computers' identifications (IDs) which are user-friendly names and are associated with the corresponding IP addresses. Similarly, the target computers 112 get registered by sending the central server 106, for example, an HTTP packet in the following illustrative format:

- HTTP header
- /MapleWML/CMServer/ApplianceLogin.asp
- Target Computer ID
- HTTP Trailer,

where the parameter "/MapleWML/CMServer/ApplianceLogin.asp" activates the central server 106 to run a script such that the information following this parameter in the packet will be loaded to an appliance database (not shown) of the central server 106. The parameter "Target Computer ID" which is associated with its IP address identifies the target computer to be registered. When the user requests the central server for the information about the files that have been shared, the central server sends the mobile device a list of registered target computer IDs, in addition to the parameter <Filename>. Therefore, the user can designate a target computer by specifying its target computer ID instead in the data transfer instruction.

Additionally, other mobile devices such as personal digital assistants can be used on condition that they are able to communicate with the gateway 102.

What is claimed is:

1. A process for using a mobile device to transfer one of a plurality of data being stored in a sub-computer system to an target computer system , the process comprising:

designating a first piece of data to be transferred and the target computer system to which the first piece of data is to be transferred as an instruction in the mobile device;

sending the instruction from the mobile device to a central computer system via a first network;

informing the sub-computer system of at least part of the instruction by the central computer system; and

transmitting the first piece of data from the sub-computer system to the target computer system via a second network according to the instruction.

2. The process of Claim 1, further comprising:

storing information relating to identifications of the plurality of data in the central computer system; and

sending said information from the central computer system to the mobile device for designating the first piece of data.

3. The process of Claim 2, further comprising:

using the mobile device to request the central computer system to send said information .

4. The process of Claim 1, further comprising:

sending the first piece of data from the sub-computer system to the central computer system according to said part of the instruction;

saving the first piece of data under a filename in the central computer system;

informing the target computer system of the filename by the central computer system; and

downloading the first piece of data from the central computer system by the target computer system according to the filename.

- 5 5. The process of Claim 1, wherein an identification of the target computer system is known to the central computer system, and wherein the step of designating the target computer system includes specifying its identification in the instruction.
- 10 6. The process of Claim 1, wherein the step of designating the first piece of data includes identifying location of the first piece of data in the instruction.
7. The process of Claim 1, wherein the step of designating the target computer system includes specifying the target computer's internet protocol address in the instruction.
- 15 8. The process of Claim 1, further comprising:
 - composing a first piece of information in the mobile device;
 - transmitting the first piece of information from the mobile device to the central computer system via the first network;
 - 20 generating a file in the central computer system by combining the first piece of information with the first piece of data retrieved; and
 - transmitting the file to the target computer system.
9. The process of Claim 8, wherein the step of composing includes composing an email, and wherein the target computer is designated by specifying in the first piece of information an email address relating to the target computer.
- 25 10. The process of Claim 9, wherein the step of generating the file includes attaching the first piece of data within the email.

11. A process for using a mobile device to transfer one of a plurality of data which is stored away from a mobile device to a target computer system, the process comprising:

5 designating a first piece of data to be transferred and the target computer system to which the first piece of data is to be transferred as an instruction in the mobile device;

10 sending the instruction from the mobile device to a computer system via a first network, the computer system being capable of accessing the plurality of data and communicating with the mobile device via the first network;

 retrieving the first piece of data by the computer system according to the instruction; and

 transmitting the first piece of data from the computer system to the target computer system via a second network according to the instruction.

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12. A process for using a mobile device to transfer one of a plurality of data being stored in a sub-computer system to a target system, the process comprising:

20 storing information relating to identifications of the plurality of data in a central computer system;

 using the mobile device to request the central computer system to send said information to the mobile device via a first network;

 sending said information from the central computer system to the mobile device via the first network;

25 designating a first piece of data to be transferred by using said information and the target computer system to which the first piece of data is to be transferred as an instruction in the mobile device;

 sending the instruction from the mobile device to the central computer system via the first network;

30 informing the sub-computer system of at least part of the instruction by the central computer system; and

transmitting the first piece of information from the sub-computer system to the target computer system according to the instruction.

13. A process for using a mobile device to send an email with an attachment
5 which is selected from a plurality of data being accessible by a computer system, comprising:

storing information relating to identifications of the plurality of data in a central computer system;

10 using the mobile device to request the central computer system to send said information to the mobile device via a first network;

sending said information from the central computer system to the mobile device via the first network;

15 using the mobile device to compose an email text, specify recipients of the email, and designate a first piece of data to be attached with the email as an instruction;

sending the email text and the instruction from the mobile device to the computer system;

informing the computer system of the recipients for the email by the mobile device via the first network;

20 retrieving the first piece of data by the computer system according to the instruction;

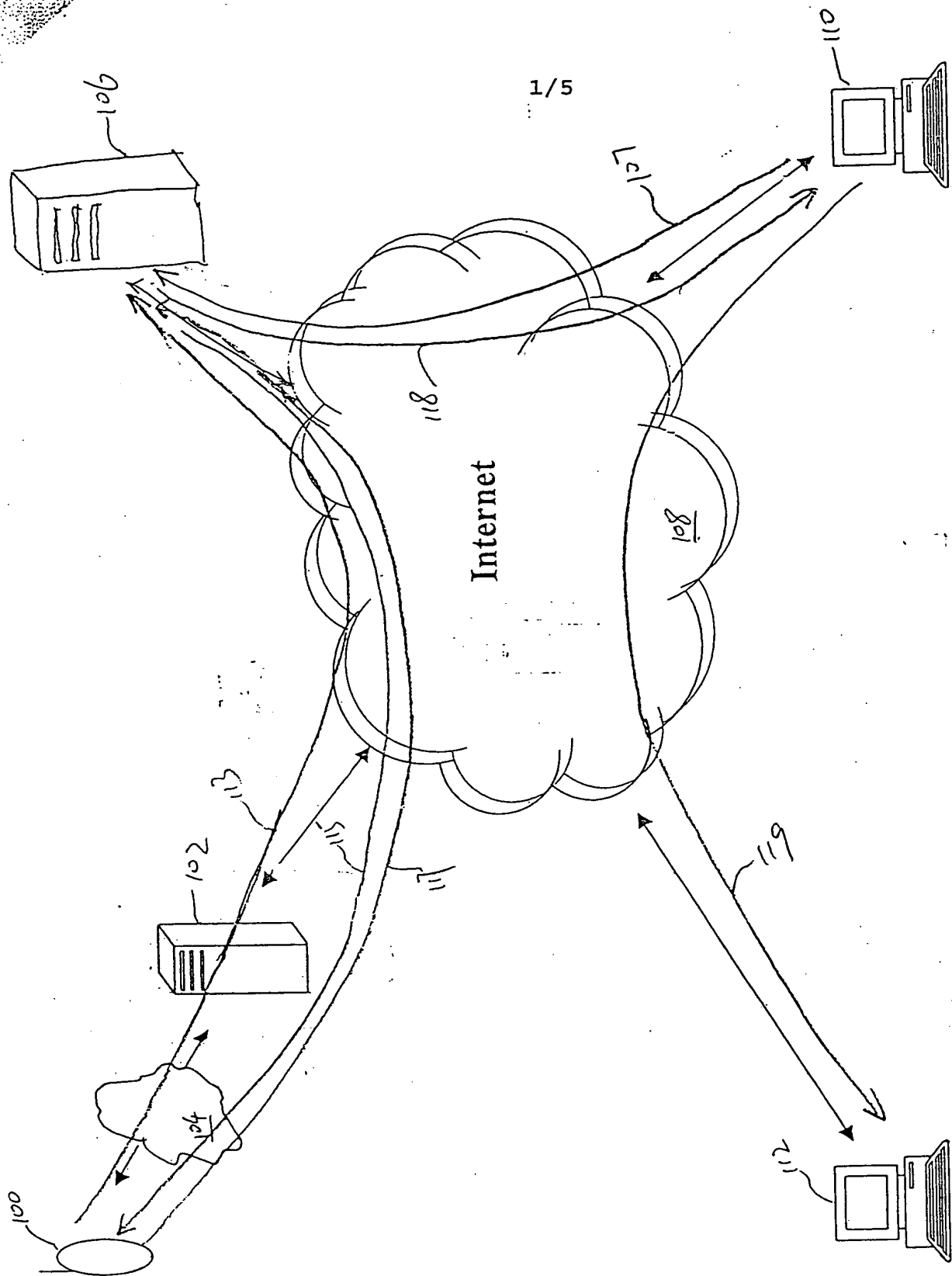
using the email text and the recipient to compose the email with the first piece of data attached by the computer system; and

25 sending the email from the computer system to the recipients via a second network.

ABSTRACT**METHOD FOR DATA TRANSFER USING A MOBILE DEVICE**

5 A method for transferring one of a plurality of data stored in a sub-computer system to a target computer system using a mobile device is provided. In such a method, the mobile device initiates the process by sending instructions to a central computer system via a first network. The instructions designate a first piece of data to be transmitted as well as the target computer system to which
10 the first piece of data is to be transmitted. According to the instructions, the central computer system retrieves the designated first piece of data from the sub-computer system. The first piece of data then is transmitted from the central computer system to the target computer system.

15 (Figure 1)



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Figure 1

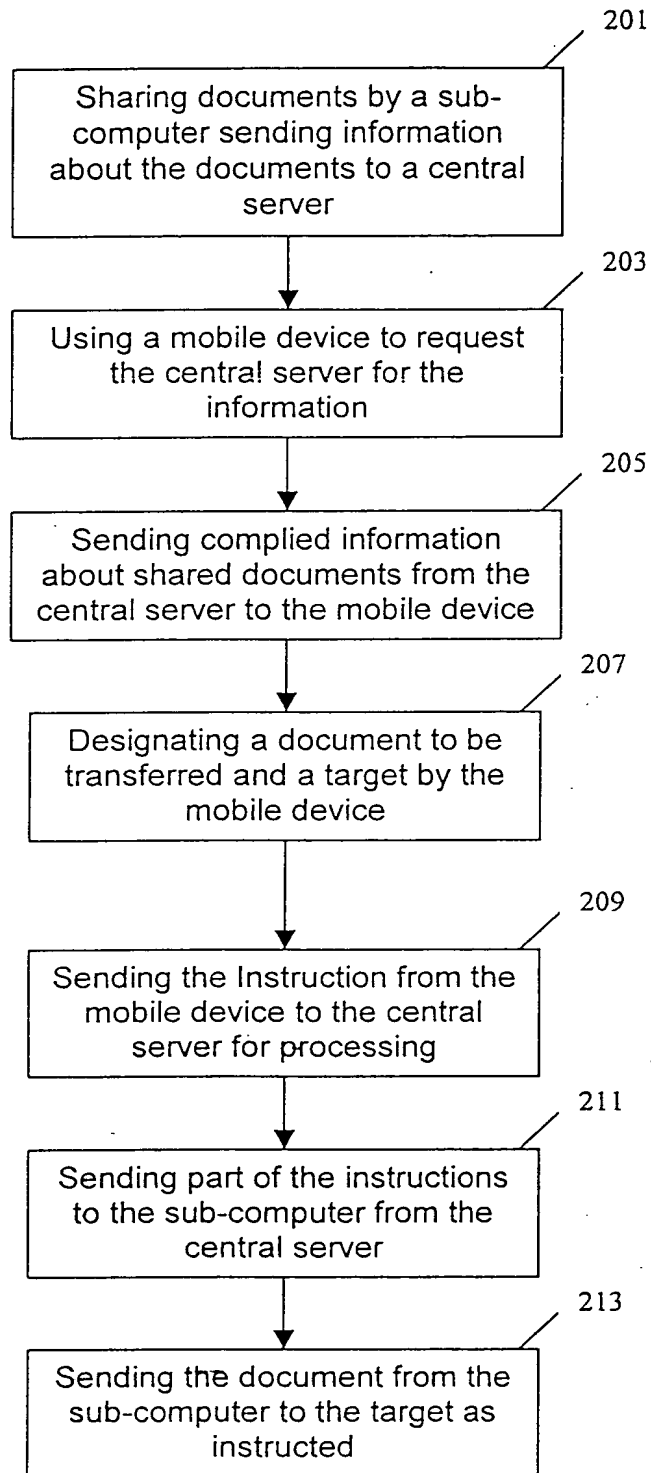


FIGURE 2

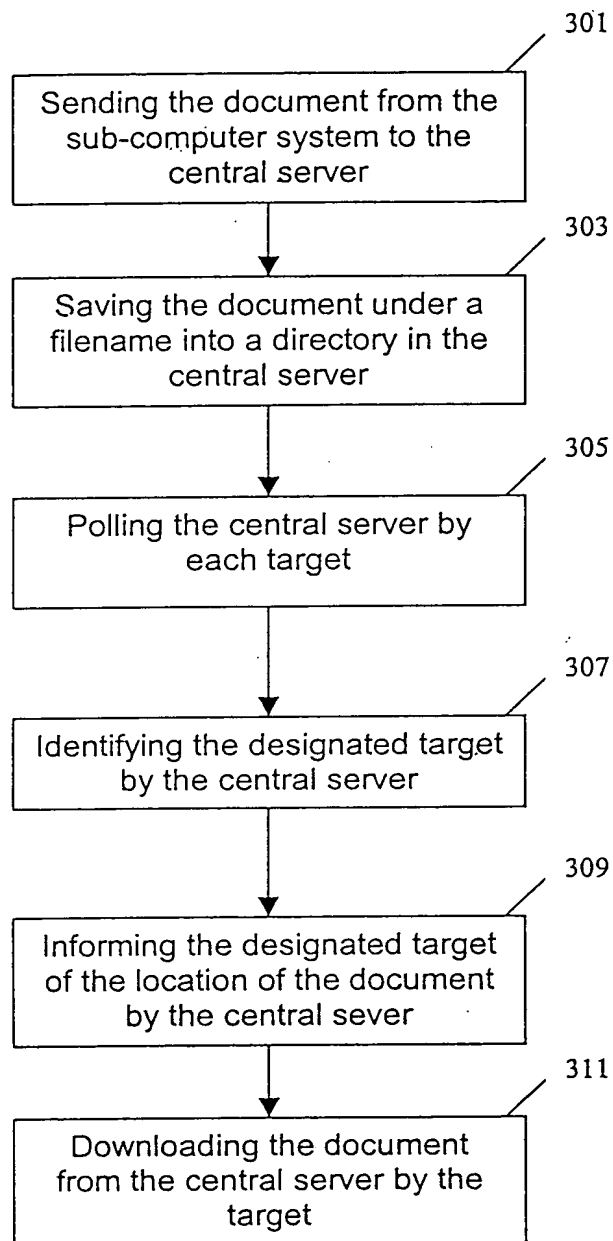


FIGURE 3

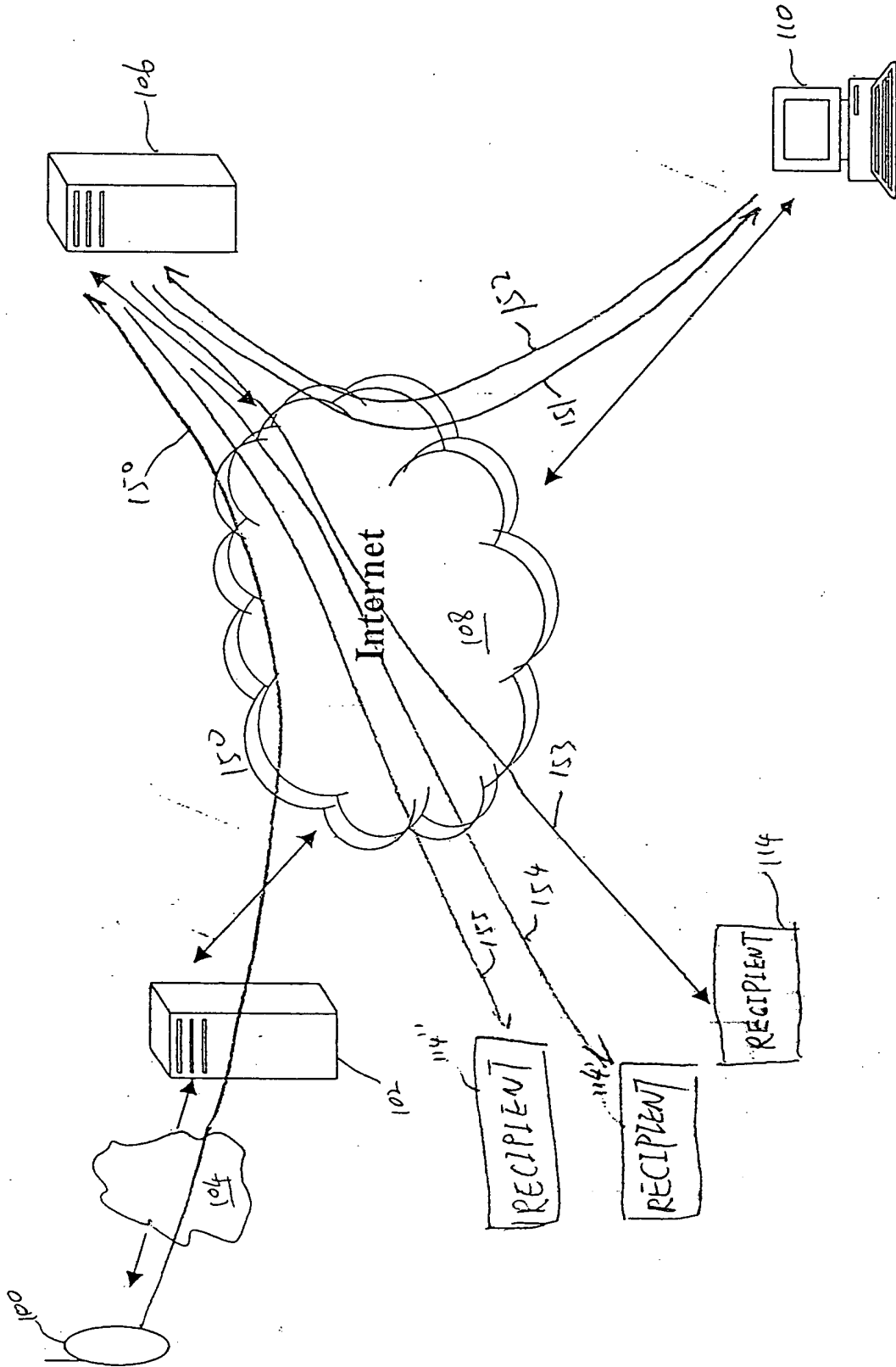


FIGURE 4.

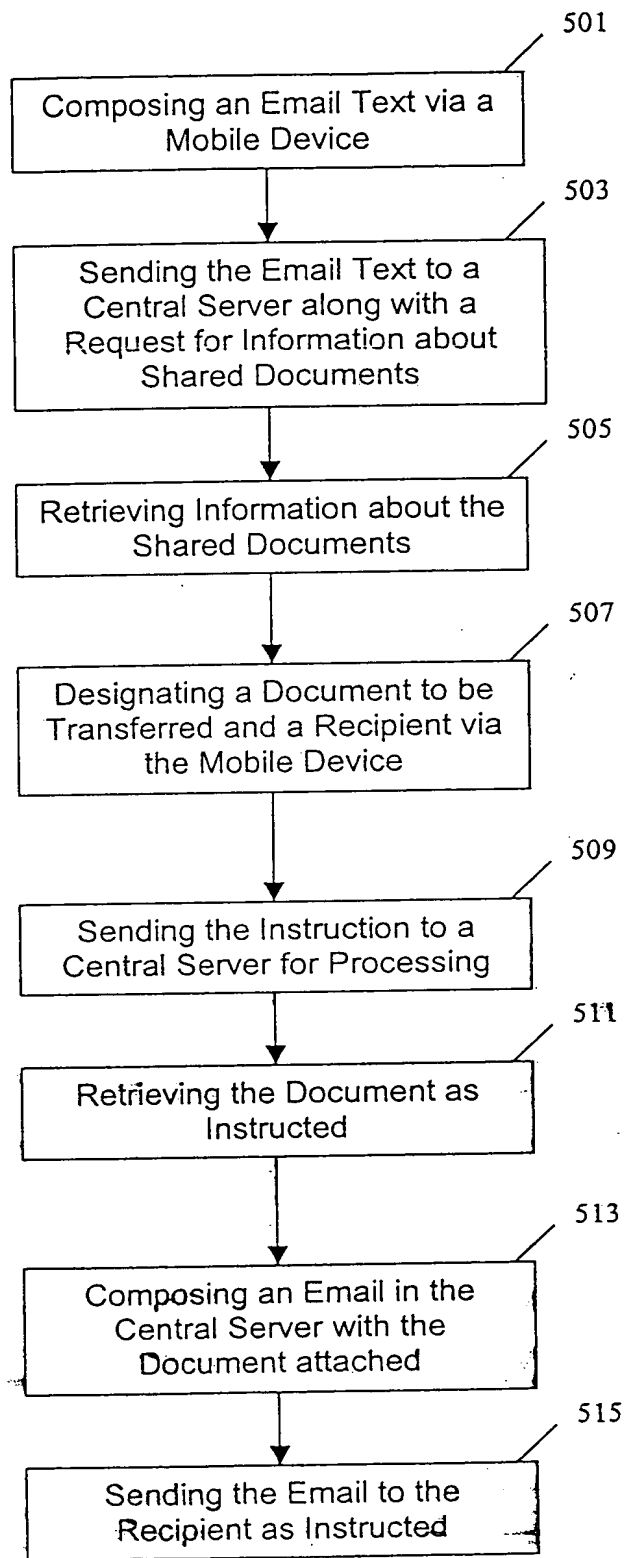


FIGURE 5